Belshaw

Counter Top Fryers

Models

616B & 616BT

Operator's Manual

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If you accept the machine from the shipping company, you are, in effect, saying that the machine is in good condition, and you must pay for the machine. Belshaw cannot pay for shipping damage, because the freight company has accepted the machine from Belshaw in good condition, and is responsible for its safe delivery. **For your protection**, inspect the machine to see that no parts are bent, scratched, or otherwise damaged. If any damage has occurred in shipping, file a freight claim with the shipping company immediately.

IMPORTANT

Keep this manual for future reference.

To unpack the fryer and transport it to the workstation:

1. Use a fork lift to transport the shipping crate to the work station.
2. Break down the shipping crate.
3. Remove all the packing materials from the fryer. These include foam, tape, brown paper, plastic, and white protective coating.
4. Position the fryer to allow sufficient space on either end of the machine for any equipment you plan to use with it.

EQUIPMENT RECORD

Please provide the information below when you correspond with us about your machine.

Purchased by _____

Installed by _____

Date of Installation _____

Model number _____

Serial number _____

0204

MN-1136EN

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Preface

The 616B and 616BT donut fryers have been designed and built using the finest materials and components available. It is the result of years of research and development. Designed into this unit are many features which will insure more quality in your products and reduce your operating cost. Attention to the instructions regarding installation, operation, and maintenance should result in years of trouble-free service.

The operator must work safely at all times and read this manual and follow its instructions and warnings. A thorough understanding of how to install, maintain, and safely operate the fryer will prevent production delays and injuries.

Heed the following warnings and all other warnings that appear in this manual:

- To avoid damaging the machine, never use force to assemble, disassemble, operate, clean, or maintain it.
- Never let water and hot shortening come in contact with each other. Moisture causes hot shortening to spatter, which may cause serious burns.
- Do not overfill the kettle with shortening. If shortening overflows the kettle, it could cause serious burns or could cause someone to slip on the floor and be seriously injured.
- Hot shortening can cause serious burns. Make sure that the system and the shortening are cool before attempting any cleaning, adjustment, disassembly, or repair.
- To avoid electrocution or other injury, unplug the machine before attempting any cleaning, adjustment, disassembly, or repair.
- Be careful never to get shortening, water, or other materials on the floor. If anything does get spilled on the floor, mop it up immediately. Materials on the floor can cause people to slip or fall, resulting in serious injury or loss of life.
- To prevent unintentional startup and possible fire, unplug the machine if there is a local power outage. When the power is restored, it is safe to plug the machine in again.
- To avoid electrocution, make sure that all electrical cords are not frayed or cracked and that they do not pass through any water or shortening.
- Make sure that all electrical cords are routed so that no one will trip over them.

1 Installation

Unpacking the Fryer

1. Use a fork lift to transport the shipping crate to the work station.
2. Break down the shipping crate.
3. Remove all the packing materials from the fryer. These include foam, tape, brown paper, plastic, and white protective coating.
4. Check the fryer carefully for any damage that may have occurred during shipping. File any claims with the shipping company.
5. Position the fryer to allow sufficient space on either end of the machine for any equipment you plan to use with it.

Initial Cleaning

Clean your fryer before using it. Wipe the inside of the kettle with a soft, damp cloth. Dry the kettle thoroughly.

WARNING

To avoid electrocuting yourself or damaging the machine, never allow water, steam, cleaning solution, or other liquid to enter the heater head or the electrical box.

WARNING

Never let water and hot shortening come in contact with each other. Moisture causes hot shortening to spatter, which may cause serious injury. Prior to use, make sure the kettle and any other parts you have washed are dry.

Installing the Fryer

1. Make sure the power requirements of the machine, found on the data/name plate, match your power source.
2. Set the fryer cabinet on a flat, dry counter or table.
3. Level the fryer.
4. Connect the fryer to a properly grounded power source. Do not turn on the power.
5. When first filling the kettle with shortening, if a hydrogenated or semi-solid shortening is used, melt some shortening and pour it into the kettle.
6. Cover the elements, thermostat bulb and high temperature limit control bulb with shortening before turning on the power.

WARNING

Do not turn the thermostat above 250°F until all the shortening has melted.

7. Due to the delicate mechanism of the thermostat, it is possible for it to get out of adjustment. If this occurs, recalibrate per the instructions in section 4.

8. The heater head assembly is equipped with a high temperature limit control. Push the reset button on the back of the heater head if power to the heater elements is cut off.
9. When heating shortening that has solidified, a pocket of shortening may overheat and cause the high temperature limit control to cut power to the elements. Push the reset button to resume heating.

Moving the Fryer

If you ever want to move the fryer to a different workstation, follow this procedure:

1. Turn off the fryer and disconnect it from the power source.
2. Allow the machine and the shortening to cool.

WARNING
Do not touch hot shortening. It can cause serious burns.

3. Remove the shortening from the fryer as explained in "Removing the Shortening" in Section 3.

WARNING
To avoid burns, falls, other injury, or death, never attempt to move the fryer when it has shortening or other liquid in it.

WARNING
Thoroughly clean and dry the floor if shortening is spilled. Materials on the floor can cause people to slip or fall, resulting in serious injury or loss of life.

6. Level the fryer and connect it to the power source, as explained in "Installing the Fryer" above.

2 Operation

Read each step **completely** before doing what it tells you to do.

1. Put enough shortening in the kettle to completely cover the heating elements, thermocouple, and high-temperature limit control probe.

   Put shortening in the kettle using one of these methods:

WARNING

Hot shortening causes severe burns.

- Melt shortening in a pan on the stove and pour it into the kettle.
- Put solid shortening into the kettle, packing it tightly around the heating elements, thermocouple, and high-temperature limit control probe.

WARNING

Air spaces can cause the shortening to overheat and catch on fire.

2. Turn on the unit by turning the thermostat clockwise 1/16 turn. When the unit is turned on, the power light located next to the thermostat knob will be lit.
3. Set the thermostat to 250°F/121°C. The "Heating" pilot light above the elements will light up, indicating that the shortening has not yet reached the selected temperature.
4. Continue adding shortening to the kettle until it reaches the "Oil Level" marks on the kettle. Use one of the following methods.

- Melt shortening in a pan on the stove and pour it into the kettle.
- Very carefully put solid shortening into the kettle.

WARNING

To avoid serious burns, be very careful not to splatter hot shortening when you add shortening to the kettle.

   Because shortening expands as it increases in temperature, put shortening in the kettle gradually. Let the shortening in the kettle heat up before you add more.

5. After all of the shortening has melted, set the thermostat to the desired frying temperature.

   The "Heating" pilot light will go out if the high temperature limit control breaks the circuit.

   Note: If the high temperature limit control does break the circuit, push the red reset button on the back of the heater head.

6. Wait for the shortening to reach the desired temperature.

WARNING

To avoid serious burns, when the fryer is operating, do not touch any part of the fryer that is in contact with hot shortening.

7. If you are frying cake or French donuts, move the cutter into place over the fryer. Refer to the cutter manual (Type N cutter) for complete installation and operation instructions.

To fry yeast-raised donuts, place donuts on the fry screen and slowly lower the screen into the fryer. With the donut stick, turn the donuts over to fry the top side. Remove the fry screen and donuts when the donuts are completely fried by lifting up the fry screen with the donuts on top of it. Immediately place on or over a tray to catch dripping shortening.

WARNING

Hot shortening will drip off the fry screens, causing a slip hazard. To avoid serious injury or loss of life, be very careful and immediately clean up any drips.

WARNING

To avoid serious burns, be careful of hot shortening dripping from the fry screens. Do not touch hot shortening and immediately clean up spills and drips.

8. Continue supplying shortening to the kettle as required. Keep the kettle filled up to the "Oil Level" marks on the side.
9. When you are done frying donuts, move the thermostat knob counter-clockwise as far as it will go.

Frying Tips

1. Use a high quality hydrogenated shortening.
2. Store your supply of cooking shortening at room temperature.
3. To prolong the life of the shortening, do not keep shortening at high temperature if the fryer is not being used.
4. Drain and strain shortening periodically. Several layers of cheesecloth will do a good job of filtering.
5. Keep the fryer and screens clean.
6. Maintain shortening at the proper level in the fryer. Add fresh shortening to keep the level at the "Oil Level" marks stamped on the kettle sides.
7. Add at least 15% fresh shortening to your kettle daily.
8. Discard shortening as soon as it tends to bubble or foam during frying.
9. At least once a day, cool a small sample of shortening from the fryer and taste it to see if it has picked up a foreign or rancid taste.

Cleaning 3

For your safety, observe the following warnings throughout the entire cleaning process.

WARNING

Thoroughly clean and dry the floor if shortening, water, or other materials are spilled. Materials spilled on the floor can cause serious injury or loss of life.

WARNING

To avoid electrocuting yourself or damaging the machine, never allow water, steam, shortening, cleaning solution, or any other liquid to enter the electrical box or the heater head.

WARNING

To avoid being burned in an explosion, never use any flammable materials for cleaning.

Cleaning the Exterior Surfaces

1. Clean the polished and painted surfaces of the fryer with a soft, damp cloth. Use a non-abrasive cleaner to remove any discoloration.
2. Polish these surfaces with a soft, dry cloth.

Cleaning the Frying Screen

1. In a sink or a dishwasher, wash the frying screen using warm water and mild detergent. Do not use an abrasive cleaner or scraper.
2. Rinse the frying screen in clear water.
3. Dry the frying screen thoroughly, using a soft cloth, before you use it again.

WARNING

Dry the frying screen thoroughly. Moisture causes hot shortening to spatter, which may cause serious injury.

4. Check the frying screen to make sure no metal is flaking off of it. If the screen is flaking, replace it immediately, so you do not get metal particles in your product.

Cleaning the Kettle

Removing the Shortening

WARNING

To avoid being burned or electrocuted, disconnect the fryer from the power source before cleaning it.

1. Disconnect the machine from the power source.
2. Let the shortening cool to 100°F/38°C.
3. Carefully dip out the shortening into a suitable container. Do not disturb the accumulated sediment in the bottom of the kettle.

WARNING

Do not use a plastic container. If the shortening is not cool enough, the container will melt, possibly causing you to be burned, and causing shortening spill.

WARNING

Do not allow the shortening to overflow the containers. Shortening will get on the floor, and if the shortening is not cool enough, you may be burned.

4. After the kettle has been drained, brush any accumulated carbon from the heater coils. Accumulated carbon causes corrosion and poor heat recovery.
5. Remove the drain tray.

WARNING

Thoroughly clean and dry the floor if shortening is spilled. Shortening on the floor can cause serious injury or loss of life.

6. Remove the heater head and element.
7. Lift out the kettle and pour out the remaining shortening and accumulated sediment.
8. Flush out the kettle with hot water to remove all sediment.

Washing

1. Wash the kettle carefully with detergent to remove all stains and burned shortening.
2. Scrub the inside of the kettle. Do not use any abrasive cleaners or scrapers.

WARNING

To avoid being burned, be very careful as you work with hot cleaning solution. Never put your hands in the solution. Wear gloves and long sleeves in case any solution splashes.

3. Dry the kettle thoroughly with a soft cloth before replacing in the fryer cabinet.

WARNING

Dry the kettle thoroughly. Moisture causes hot shortening to spatter, which may cause serious injury.

4. Make sure the kettle is properly seated in the case.
5. Install the heater head.

Calibrating The Fryer 4

Calibration of 618-6 Temperature Indicator

To check calibration, use the following steps.

1. Turn the dial of the thermostat to a medium temperature setting of approximately 350° F.
2. Allow enough time for the temperature to stabilize and the thermostat to cycle ON and OFF.
3. Use a potentiometer or a good grade of thermometer to determine temperature.

To Recalibrate:

1. Remove the ring (A) and glass crystal.
2. Insert a screwdriver in slot B, and while holding the slotted stem in position, move the temperature indicating needle (C) to the correct setting with your finger.
3. Check the temperature of the frying area again and check this against the indicator temperature reading.
4. Re-install the ring (A) and glass crystal.

Calibrating the Thermostat

Each thermostat is adjusted at the factory and calibrated on precision instruments to control temperatures accurately. Adjustment or recalibration is not needed unless the thermostat has been mishandled in transit or changed or abused while in service.

To check calibration:

1. Important: Make sure that the fryer is filled with shortening. Read the warnings on the control panel about high temperatures.
2. Use a good thermometer that reads temperatures up to 400°F/204°C. Place the thermometer in the shortening.
3. Set the fryer temperature to 375°F/190°C. Allow enough time for the temperature to stabilize.
4. During a 10 minute test period, the temperature should not fall below 365°F/185°C, or exceed 385°F/196°C.

To Recalibrate:

1. Remove temperature dial from shaft B by pulling upward.
2. Using a small screwdriver, turn screw A as follows:
   - Counter clockwise to increase temperature
   - Clockwise to decrease temperature
3. Replace the control dial on the dial shaft
4. Recheck the calibration and continue adjusting as necessary.

Appendixes

A Donut-Making Helps

B Electrical Components

C Parts Lists

D Wiring Diagram

E Limited Warranty

A Donut-Making Helps

Care, Maintenance and Cleaning Plungers, Cylinders and Hoppers

The plungers and cylinders of your donut machine are precision instruments built from alloy steels and aluminum. They should be handled with care to give continued satisfactory performance.

When cleaning aluminum, selection of the right type of cleaner is your most important consideration. Any household dish washing detergent which is safe for aluminum does a good job of cleaning and does not attack aluminum. Strong alkali cleaners, such as lye, soda ash, and tri-sodium phosphate will discolor or even corrode aluminum even in weak solutions.

WARNING
To prevent injury, disconnect machine from power source before removing or installing plungers, cylinders, or hopper.

DO NOT handle roughly or drop on hard surfaces.

DO NOT mix with other utensils in the sink when washing.

DO NOT allow to rust. Always wash parts thoroughly. Dry completely and then lubricate with mineral oil or liquid shortening before storing or reinstalling in the machine.

DO NOT force the machine if it becomes jammed. Disassemble and remove any obstruction to prevent damage to the plungers.

Washing Plungers, Cylinders and Hoppers by Hand

1. Remove "O" rings if so equipped.
2. Use plenty of hot water
3. Add cleaner approved for aluminum in concentrations recommended by manufacturer.
4. Presoak to loosen stubborn or dried-on deposits.
5. Use a non-scratching plastic scour cloth to remove soil and restore luster.
6. Rinse in clear, hot water (170-190°F, 77-88°C)
7. Wipe completely dry.
8. Dip plungers and cylinders in mineral oil or liquid shortening to prevent rust and sticking.

Machine Washing Plungers, Cylinders and Hoppers

1. Remove "O" rings, if so equipped.
2. Clean, hot water must be used with a minimum temperature of 160°F (71°C) for single tank conveyor or machines. For all other machines, a temperature of 140-160°F (60-71°C) must be used.
3. Use clean, hot water (170-190°F; 77-88°C) during the rinsing cycle. Avoid contamination of the rinsing water with the detergent.
4. Dry completely. Dip plungers and cylinders in mineral oil or liquid shortening to prevent rust and sticking.

CAUTION
Never immerse main cutter frame assemblies, cams, bearings, rollers or electrical components in water.

Special Instructions for the care of French Plungers

The French plunger **must** be handled with great care. Before each use, put one drop of mineral oil on each of the gibs that slide in the grooves near the top of the plunger. After each use, unscrew the lower piston and remove the product former. Thoroughly wash and dry and then oil the parts with mineral oil or liquid shortening to prevent sticking. Reassemble the plunger. Be certain that the **bottom piston** is threaded into place **completely**.

Tips on Making Quality Cake Donuts

- Use the correct batter temperature.

  In general, the correct batter temperature is 75°-80°F/24°-27°C. Check the mix manufacturer's instructions, as the recommended temperature range may vary.

  If the batter is too warm, the donuts will lack volume and may "ring out" or be misshapen. If the batter is too cold, the donuts will stay under the shortening too long, fry too slowly, and crack open or ball up. They may also absorb excess shortening and lose volume.

- Use the correct floor time.

  A floor time of 10 minutes between mixing and cutting allows the baking powder to react with the water. This helps the donuts attain the proper volume the proper level of shortening penetration.

  If the floor time exceeds 30 minutes, the mix will gas off, the donuts will lose volume and shape and will absorb too much shortening.

- Use the correct frying temperature.

  The correct shortening temperature for frying is 370°-380°F/188°-193°C.

  If the shortening is too hot, the donuts will fry too quickly on the outside and will lose volume. The donuts may also become dense inside.

  If the shortening is too cold, the donuts will spread too rapidly, will form large rings, will tend to crack open, will be too light in appearance, and will absorb too much shortening.

- Maintain the proper shortening level. We recommend a distance of 1 1/4" between the cutter and the shortening.

  If the shortening is too deep, the donuts may not turn over when they reach the turner, causing them to cook unevenly.

  If the shortening is too shallow (too far below the cutter), the donuts may not drop flat, may turn over while submerging and surfacing, and may become irregular, cracked, or rough-crusted.

- Ensure that the donuts absorb the right amount of shortening.

  Donuts should absorb 1-1/2 to 3 oz/42 to 85 g of shortening per dozen, depending on their weight. You can achieve proper absorption by following tips 1-3.

- If the donuts do not absorb enough shortening, they will not keep well.

  If they absorb too much shortening, they will lose volume and may become misshapen. If this happens, follow tips 1-3, mix the batter a little longer than usual, turn the donuts as soon as they become golden brown, and turn the donuts only once.

Calculating Correct Water Temperature

The following is an example of how to calculate the correct water temperature to use. You must use your own room temperature, dry mix temperature, desired batter temperature, and, if you are making yeast-raised donuts, estimated temperature increase during mixing.

	Cake Donuts		Yeast-Raised Donuts	
	°F	°C	°F	°C
Room temperature	72	22.2	72	22.2
Dry mix temperature	+70	+21.1	+70	+21.1
Total **A**	142	43.3	142	43.3
Desired batter temperature	75	23.9	80	26.7
	x3	x3	x3	x3
Total **B**	225	71.7	240	80.1
Total **B**	225	71.7	240	80.1
-Total **A**	-142	-43.3	-142	-43.3
Desired water temp. for cake donuts	**83°F**	**28.4°C**	98	36.8
			↓	↓
Figure from above			98	36.8
Temperature increase during mixing (average: 30°F/17°C)			-30	-17
Desired water temperature for yeast-raised donuts			**68°F**	**19.8°C**

Ratios of Plunger Sizes to Donut Weights

The weights given are for donuts without icings or other toppings. They are provided for reference only, as weights vary according to the density of the batter.

Plunger Size	Donut Weight per Dozen
1”	5-8 oz/142-227 g
1 7/16”	10-17 oz/283-482 g
1 9/16”	14-21 oz/397-595 g
1 13/16”	19-23 oz/539-652 g

Temperature Conversion

To convert temperatures from Fahrenheit to Celsius, subtract 32 from °F and divide the result by 1.8. For example, 212°F-32/1.8 = 100°C.

To convert temperatures from Celsius to Fahrenheit, multiply °C by 1.8 and add 32 to the result. For example, (100°C x 1.8) + 32 = 212°F.

°F	°C	°F	°C
55	12.8	340	171.1
60	15.6	345	173.9
65	18.3	350	176.7
70	21.2	355	179.4
75	23.9	360	182.2
80	26.7	365	185.0
325	162.8	370	187.8
330	165.6	375	190.6
335	168.3	380	193.3

B Electrical Components

This appendix explains how to test the continuity of electrical components in your fryer. These include the toggle switch and the thermostat.

The appendix also contains a document by the Robertshaw Controls Company, the maker of the thermostat we use in the 618L, 624, and 634. It explains how to check, adjust, and recalibrate the thermostat.

Testing the Continuity of the Toggle Switch

WARNING
To avoid the possibility of electric shock, disconnect the machine from the power source before testing.

1. Disconnect the machine from the power source.
2. Disconnect the terminal wires from the switch.
3. Obtain a continuity tester or a volt-ohm meter. If neither of these instruments is available, make a continuity tester using a battery and a bulb. See Figure B-1.
4. Connect the wires of the continuity tester to the switch terminals, as shown in Figure B-1, and test the switch in the ON and OFF positions. The switch should show continuity only when in the ON position.

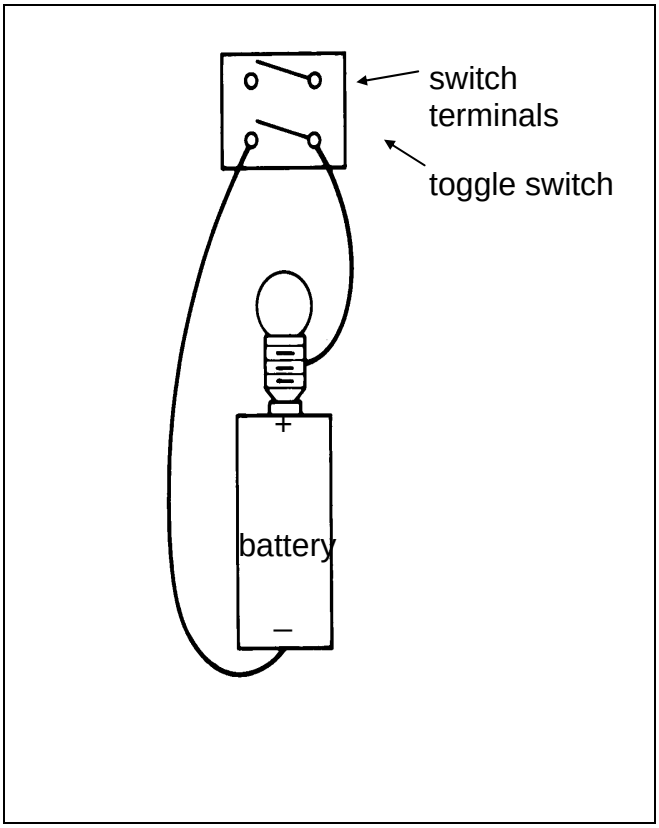


Figure B-1. Toggle Switch Continuity Test.

Testing the Continuity of the Thermostat

WARNING

To avoid the possibility of electric shock, disconnect the machine from the power source before testing.

1. Disconnect the machine from the power supply.
2. Disconnect the terminal wires from the thermostat.
3. Connect the continuity tester across the B terminals indicated in Figure B-2. This set of contacts should be closed whenever the thermostat is on. To test, start with the thermostat in the OFF position. Then turn the thermostat up until you hear a distinct click (at about the 175°F/79°C setting). At this time, there should be continuity across the B terminals.
4. Connect the continuity tester across the A terminals indicated in Figure B-2. Start with the thermostat in the OFF position and turn the thermostat up until you hear a distinct click. If there is no continuity (the indicator or light does not come on), proceed to step 5.
5. With the continuity tester still connected, turn the thermostat knob to OFF and remove the knob. There is an adjusting screw in the center of the knob stem. Turn it counter-clockwise until there is continuity. If there is no continuity (the indicator or light does not come on), then the thermostat is defective. If there is continuity, proceed to step 6.

6. Immerse the thermostat sensing bulb in a pan of boiling water and set the thermostat at about 212°F/100°C. The continuity tester's indicator or light should go off. If the indicator or light does not go off, increase the temperature setting of the thermostat until it does. Then recalibrate the thermostat according to the manufacturer's instructions. If the indicator or light will not go off at any setting or recalibration, then the thermostat is defective.

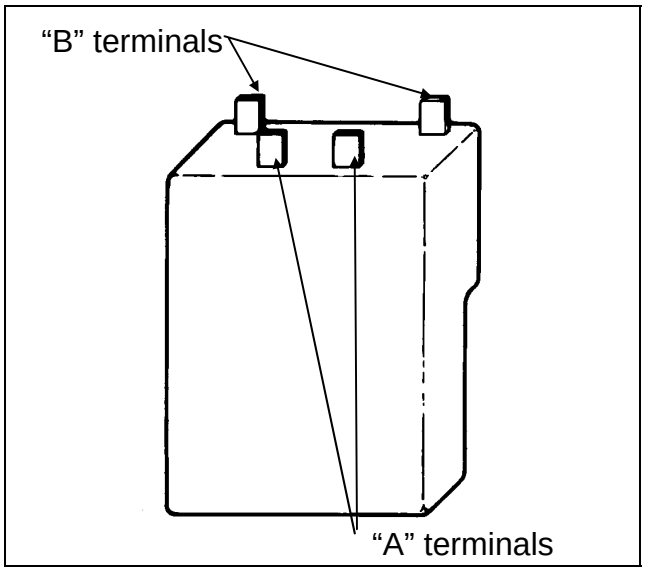


Figure B-2. Thermostat Terminals.

C Parts Lists

The following pages contain lists of the parts that make up the 616B and 616BT Fryers.

You can use the parts lists to order replacement parts. When you do, please provide electrical information about your fryer. Some of the part numbers vary according to the voltage, phase, and cycle of the machine.

IMPORTANT

The parts lists and assembly drawings are meant as guides. Because Belshaw constantly improves its products, parts lists and assembly drawings may not reflect the most recent design changes.

FIGURE C-1. 616B/616BT FINAL ASSEMBLY.

BILL OF MATERIAL

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	----------	Heater Head Assembly
	1	616B-1500	208 Volt, 4000 Watts
	1	616B-1501	236 Volt, 4400 Watts
	1	616BT-1500	(Not Shown) 616BT; 208 Volt, 4000 Watts
	1	616BT-1501	(Not Shown) 616BT; 236 Volt, 4400 Watts
2	2	616-512	Frying Screen Assembly
3	1	634-76	Tilt Latch Sleeve
4	1	616-1004	Drain Tray Assembly
5	1	616-18	Kettle
6	1	616-7A	*Proofing Screen
7	1	616-7C	*Proofing Screen Detachable Handle
8	1	616-1003	Frying Case Assembly (Includes items {4}#9, {4}#10)
9	4	H-13A-2	Fryer Leg
10	4	H-13A-1	Neoprene Foot
11	1	634-75	Bracket Sleeve
12	1	616-25	Backup Plate
13	1	616-21	Head Mounting Bracket R.H.
14	1	616-24	Tilt Launch
15	1	616-20	Head Mounting Bracket L.H.
16	3	618-116	Label – “Caution – Hot”
17	1	EP18/24-140	Label – “Belshaw”
		616-1014	*(Not Shown) Dual Fryer Mounting Kit (Includes #616-508 Joining Plate Assembly, N-22 Column Arm, N-48 Pivot Arm, & All Fasteners)

FASTENERS

ITEM	QTY.	PART NO.	DESCRIPTION
A	1	1/4-20	Hex Nut
B	4	¼-20x5/8	Hex Head Mch. Screw
C	1	10-24x1	Socket Head Cap Screw
D	1	#10	SAE Flat Washer
E	1	¼-20x1-1/2	Socket Head Cap Screw
F		10-24	Hex Nut

* Optional Equipment

FIGURE C-2. 616B/616BT HEATER HEAD ASSEMBLY.

BILL OF MATERIAL

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	----------	Heater Head Case Assembly:
	1	616B-500	616B Fryer Only
	1	616BT-505	616BT Fryer Only
2	1	618-8A	Thermostat Knob
3	2	618-11	Pilot Loght – 220 Volt
4	1	DR42-607	Limit Control Mounting Bracket
5	1	FM200-65	High Temperature Limit Control
6	1	DR42-162	Thermostat
7	1	616BT-15	Heater Head Bottom
8	1	616BT-507	Power Cord Assembly
9	1	H-12	Cord Clamp
10	1	616B-3	Power Cord Tie Down Clamp
11	1	----------	Heater Head Skirt Assembly
	1	614A-503	616B Fryer Only
	1	616BT-508	616BT Fryer Only
12	1	H-40	Upper Bulb Bracket
13	1	----------	Heater Element (Incl. {2}C, {2}D, {2}K):
	1	H-1	208 Volt, 4000 Watts
	1	H-1A	236 Volt, 4400 Watts
14	1	H-41	Lower Bulb Bracket
15	1	614-17	Bulb Bracket
16	1	616B-2	Bulb Bracket Plate

616BT Fryer Parts Not Shown:

	618-6	Temperature Indicator

FASTENERS

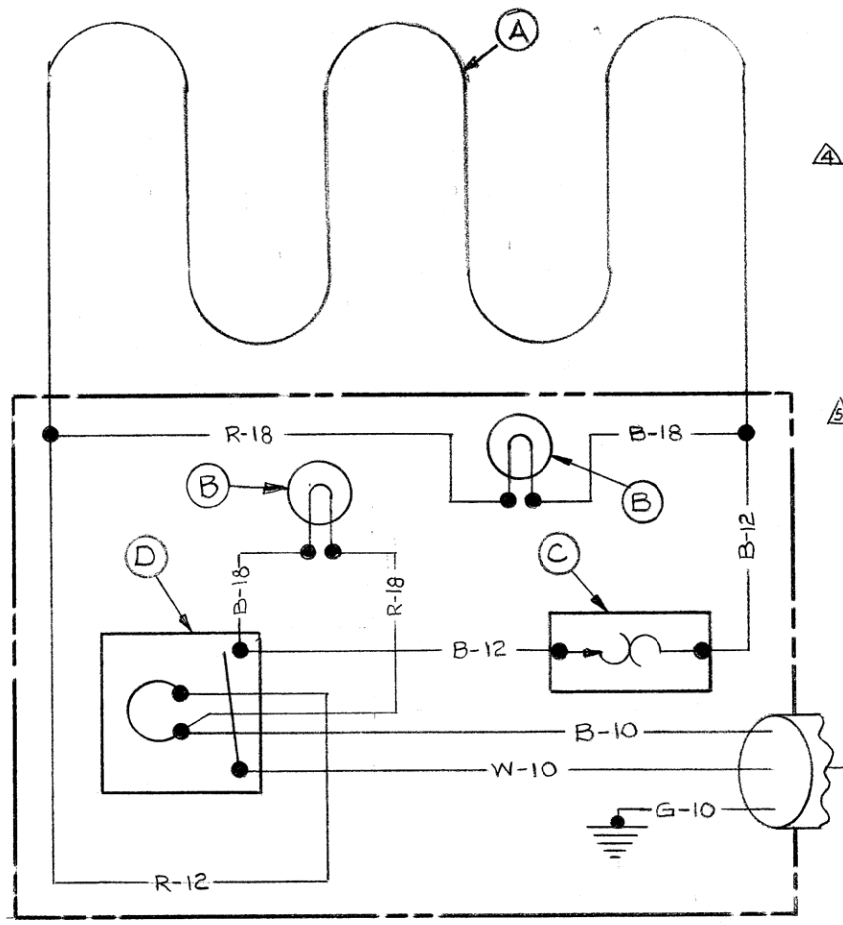
ITEM	QTY.	PART NO.	DESCRIPTION
A	5	10-24x3/8	Round Head Slotted Mch. Screw
B	2	6-21x1/4	Pan Head Slotted Mch. Screw
C	2	5/8-18	Hex Jam Nut
D	2	5/8”	Metal Washer
E	2	#6x3/8	Blunt Nose Sheet Metal Screw
F	6	10-24	Hex Nut
G	6	#10	Internal Tooth Lockwasher
H	1	10-24x5/8	Round Head Slotted Mch. Screw
J	2	10-24x1	Round Head Slotted Mch. Screw
K	2	5/8”	Fiber Washer
L	1	#4x3/16	Blunt Nose Sheet Metal Screw
M	2		Round Head Slotted Mch. Screw
N	2		Round Head Slotted Mch. Screw
P	2		Round Head Slotted Mch. Screw

D Wiring Diagrams

This section contains the wiring diagram for this machine.

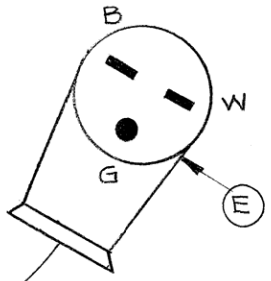
616B-4000 (Domestic)

616B-4000



(A)	H-1	HEATER ELEMENT, 4000W.@208V.
	H-1A	HEATER ELEMENT, 4400W.@236V.
4 (B)	MK-64	PILOT LIGHT-250V., YELLOW
(C)	FM200-65	HI-TEMP LIMIT CONTROL
(D)	DR42-162	THERMOSTAT
(E)	616BT-507	POWER CORD ASSEMBLY

5 NOTE: USE 105°C MACHINE TOOL WIRE.



614A SERIAL# W3063-ON 4

616B SERIAL# W3969-ON 4

616BT SERIAL# W713-ON 4

ORIG. DWG

QNTY	ASSEMBLY	REVISION / DATE	APP
		4 REVD. & REDRAWN PER D.C.R. 4-14-88	MM
		5 ADDED NOTE 1-30-89	

TOL UNLESS NOTED	BELSHAW BROS., INC. Seattle, Washington			
DEC. ± .010	W/D-208/236V. (DOMESTIC) (FOR FRYERS 614A, 616B, 616BT)			
ANG. ± 1/2°	TITLE			
FRACT. ± 1/32	MATERIAL —			
— SCALE	CC DRAWN	MCM APPROVED	4-14-88 DATE	616B-4000 DRAWING NUMBER

US/Canada/Mexico Limited Warranty and Return Policy

Belshaw Brothers Inc. warrants parts of its manufacture and assembly of equipment to be free from defects in workmanship and material which would result in product failure under normal use and service. Belshaw's entire liability under this Warranty is limited to either repairing or replacing at its factory or; on user's premises, at Belshaw's option, any equipment or parts thereof, which shall be determined by Belshaw to be defective. If necessary to return parts to the factory they must be shipped transportation charges prepaid**. This shall be purchaser's sole and exclusive remedy.**

Belshaw reserves the right to make changes in design; or add any improvement, at any time without incurring any obligations to install, the same, on equipment previously sold.

This warranty is expressly in lieu of any and all other warranties express or implied, including: implied warranties of merchantability and fitness for any particular purpose, and all other obligations or liabilities what so ever on Belshaw's part. All statutory or implied warranties, other than title, are expressly nullified and excluded.

Belshaw neither assumes nor authorizes any person to assume for it any obligation or liability in connection with the sale of Belshaw's products or parts thereof.

Possession, use/or operation of equipment, or parts sold hereunder for any other than their designed purpose, or use of equipment which is in poor repair, modified, improperly operated, or neglected is done at the owner's risk. Belshaw hereby disclaims any liability for these actions and shall not be liable for defects in or for any damages or loss to the property sold which is attributable to such actions.

Under no circumstances shall Belshaw be liable for any indirect, special, incidental, or consequential damages arising out of, or from the use of Belshaw's product by buyer, it assignees, employees, agents or customers.

Belshaw makes no express warranties except those contained in this Warranty concerning the product sold hereunder. No modification or alteration of this Warranty shall be made except by Belshaw in writing.

Warranty Period / Guidelines
This limited warranty shall extend for a period of one year from date of shipment and to the original owner only. It covers parts (manufactured by Belshaw) and labor. This warranty covers only items sold within the United States, Canada and Mexico. A pre-authorization must be obtained from Belshaw before any warranty work is carried out, failure to do so may void the warranty of the product.

Limited Warranty
With respect to parts not manufactured by Belshaw, warranty coverage shall be limited to the original part manufacturer's warranty, or the Belshaw limited warranty, whichever is the lesser coverage period. In no case will the warranty be in excess of 18 months after date of shipment of the equipment.

Replacement parts provided under the terms of this warranty are warranted for the remainder of the original warranty period applicable to the product.

Exclusions
This warranty excludes from its coverage and does not apply to: (a) solenoid and relay coils; (b) lamps; (c) "O" rings; (d) belts; and (e) impellers. These items are excluded because (1) failure is usually due to causes beyond our control; (2) it is not practical to accurately determine the failure cause; and (3) the normal life of the parts is shorter than our warranty period.

Procedure for Return:
To speed up your credits for returned equipment, we have a return goods policy and procedure. Our procedure starts with a phone call to (206) 322-5474 or Service Department for a return authorization. When contacting Service Dept. you should be ready to give:

- Customer name, address, phone number and individual's name, Invoice number and date, Model number and serial number, reason for return, i.e. credit, exchange, warranty, or repair. Description of item and problem.

When we get this information we will issue you a Return of Goods Authorization Number (RGA). This number must be marked clearly on the outside of the package. If the package is not clearly marked with the RGA#, then the package will be returned unopened to the sender. The RGA# will be open for 30 days, if returnable goods have not been received within the 30 days, then RGA# will be voided.

Return goods must be:

- Returned freight prepaid, packaged securely and carefully so that in-transit damage cannot occur.

- Marked so the package contains the RGA# in the first line of the address line, "Attn: RGA#" (the number being the number given you by the Belshaw service department.)

Please note the following:

- If the returned goods were sent to you due to our mistake, then we will pay all freight charges via our choice of carrier.

- If the returned goods failed while in service and are still covered by warranty, they need to be returned freight prepaid by you. We will then replace the goods at no charge.

- When returning parts for re-stock: our minimum re-stocking charge is 20% of original invoice amount or $20 (whichever is greater), providing the equipment is in new, never-been-used condition. Restocking charges may be increased above the minimum, depending on how much rework the returned goods need. Final determination will be made after factory inspection of goods.

- No RGA# will be issued if the item in question was invoiced anytime prior to 180 days of the request

Following these guidelines will help expedite the processing of your return.